

**Amendments to the Claims**

Claim 1-62 (cancelled).

Claim 63 (previously presented): A cathode assembly comprising:

a plurality of silicon-comprising emitter tips, at least one of the emitter tips being substantially conical and comprising a tip portion supported by a ~~frustum~~ frustum portion, the tip and ~~frustum~~ frustum portions including sidewalls; and

a coating over the tip portion, the coating not being along the ~~frustum~~ frustum portion sidewalls, wherein the coating comprises a first material having a lower work function than silicon.

Claim 64 (previously presented): The assembly of claim 63 wherein the tip portion terminates in a pointed apex.

Claim 65 (previously presented): The assembly of claim 63 wherein the at least one of the emitter tips comprises conductively doped polysilicon.

Claim ~~62~~ 66 (currently amended): The assembly of claim 65 wherein the ~~frustum~~ frustum portion comprises conductively doped polysilicon.

Claim ~~66~~ 67 (currently amended): The assembly of claim 65 wherein the tip portion comprises conductively doped polysilicon.

Claim ~~67~~ 68 (currently amended): The assembly of claim 63 wherein the at least one of the emitter tips consists essentially of conductively doped polysilicon.

Claim ~~68~~ 69 (currently amended): The assembly of claim 63 wherein the at least one of the emitter tips comprises conductively doped silicon.

Claim ~~69~~ 70 (currently amended): The assembly of claim 69 wherein the ~~frustrum~~ frustum portion comprises conductively doped silicon.

Claim ~~70~~ 71 (currently amended): The assembly of claim 69 wherein the tip portion comprises conductively doped silicon.

Claim ~~71~~ 72 (currently amended): The assembly of claim 63 wherein the at least one of the emitter tips consists essentially of conductively doped silicon.

Claim ~~72~~ 73 (currently amended): The assembly of claim 63 wherein the first material comprises diamond.

Claim ~~73~~ 74 (currently amended): The assembly of claim 63 wherein the first material comprises boron nitride.

Claim ~~74~~ 75 (currently amended): The assembly of claim 63 wherein the first material comprises cesium.

Claim ~~75~~ 76 (currently amended): The assembly of claim 63 further comprising a second material along the ~~frustrum~~ frustum portion sidewall, the second material being different than the coating.

Claim ~~76~~ 77 (currently amended): The assembly of claim 63 wherein the coating is along the tip portion sidewalls.

Claim ~~77~~ 78 (currently amended): A cathode assembly comprising:

a substrate having a plurality of substantially conical emitter tips thereover, each of the conical emitter tips terminating in a pointed apex and having a tip portion sidewall and a ~~frustrum~~ frustum portion sidewall; and

material over the substrate and between at least two of the emitter tips, the material having an upper surface and edges contacting the ~~frustrum~~ frustum portion sidewall without contacting the tip portion sidewall, wherein the entirety of the upper surface is exposed.

Claim ~~78~~ 79 (currently amended): The assembly of claim 78 wherein the material comprises silicon dioxide.

Claim ~~79~~ 80 (currently amended): The assembly of claim 78 wherein the emitter tips comprise silicon.

Claim ~~80~~ 81 (currently amended): The assembly of claim 80 wherein the emitter tips comprise conductively doped polysilicon.

Claim ~~81~~ 82 (currently amended): The assembly of claim 80 wherein the emitter tips consist essentially of conductively doped polysilicon.

Claim ~~82~~ 83 (currently amended): The assembly of claim 80 wherein the emitter tips comprise conductively doped silicon.

Claim ~~83~~ 84 (currently amended): The assembly of claim 80 wherein the emitter tips consist essentially of conductively doped silicon.